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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/822,507	04/12/2004	Alexander William Hyndman	226079	3041

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LEYDIG VOIT & MAYER, LTD  
TWO PRUDENTIAL PLAZA, SUITE 4900  
180 NORTH STETSON AVENUE  
CHICAGO, IL 60601-6731

EXAMINER
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DOUGLAS, JOHN CHRISTOPHER

ART UNIT	PAPER NUMBER
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1797

MAIL DATE	DELIVERY MODE
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12/27/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/822,507	<b>Applicant(s)</b> HYNDMAN ET AL.	
	<b>Examiner</b> John C. Douglas	<b>Art Unit</b> 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 19 October 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 71-85 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 71-85 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

Examiner acknowledges the response filed on 10/16/2007 containing remarks and amendments to the claims. A new rejection follows, necessitated by amendment.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

1. Claims 71-73, 77 and 78 are rejected under 35 U.S.C. 103(a) as being unpatentable over Duyvesteyn (US 600709) in view of Graham (US 5143598).

Duyvesteyn discloses where a tailings stream comprising bitumen, solvent, water, and solids is sent to a gravitational separation zone, where an overflow stream, a stream containing bitumen and solvent, and a water stream is separated and where the water separated is recycled, followed by a solvent recovery separation. The gravitational separation step can be aided by flotation and the tailings component of the gravitational separator is recycled to a flotation cell. See Duyvesteyn, column 5, lines 2-33, column 11, lines 54-64, and Figure). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the process of Duyvesteyn to include where the solvent recovery step is performed before the gravitational separation because according to *In re Burhans*, 154 F.2d 690 (CCPA 1946), the selection of any order of performing process steps is prima facie obvious in the absence of new or unexpected results (see MPEP2144.04 IV. C.).

Duyvesteyn does not disclose where the solvent recovery separation recovers substantially all of the solvent as a separate solvent component.

However, Graham discloses a bitumen recovery process where a solvent recovery separation of a tailings component where a solvent stream is obtained and a

clean mineral and water slurry is obtained in order to further recover bitumen from the tailings stream (See Graham, column 11, line 59 – column 12, line 19).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the process of Duyvesteyn to include a bitumen recovery process where a solvent recovery separation of a tailings component where a solvent stream is obtained and a clean mineral and water slurry is obtained in order to further recover bitumen from the tailings stream.

2. Claims 74-76, 79, and 80-85 are rejected under 35 U.S.C. 103(a) as being unpatentable over Duyvesteyn in view of Thompson (US 4368112).

3. With respect to claims 74, 75, 79, 80, 84, and 85, Duyvesteyn discloses everything in claims 71-73, 77, and 78, but does not disclose where the solvent recovery zone comprises first and second stages to produce underflow and overflow streams, where part of the underflow from each stage is pumped back to the stage to agitate the tailings component, while the remaining underflow component is sent to the second stage.

However, Thompson discloses that the solvent recovery of the prior art was accomplished through a series of distillation means in order to boil off the solvent from the oil (see Thompson, column 1, lines 36-40).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the process of Duyvesteyn to include where the solvent recovery was accomplished through a series of distillation means in order to boil off the solvent from the oil because such a method is prior art.

Thompson does not disclose where the underflow from each stage is pumped back to the stage to agitate the tailings component, while the remaining underflow component is sent to the second stage. However, such a step would be an equivalent to a recycle stream of part of the product stream. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the process of Duyvesteyn in view of Thompson to include a recycle of part of the oil component from each separator back to the separator, because recycling a product from a separation back to the separation zone is known in the art to achieve a higher degree of separation of the final product.

4. With respect to claims 76 and 81-83, Applicant admits in the background of the specification that water which is recovered may be recycled for re-use in various stages of the process in order to recover valuable heat contained in the water (see Applicant's specification, page 2). The solvent recovery step requires heat in order to separate the solvent (see Thompson, column 8, lines 9-18 and Figure 2). Therefore, it would have been obvious to one having ordinary skill in the art to send the heated recovered water to the solvent recovery zone because the solvent recovery zone is stage in the process that requires the addition of heat.

### ***Response to Arguments***

Applicant's arguments with respect to claim 71 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's next argument is that there is no motivation to include a step of pumping part of the underflow back into the solvent recovery stage. Applicant argues that one skilled in the art would not recycle the separated asphaltenes back to the gravity separation step. However, since recycling is known in the art (see rejection, paragraph 3), it would have been obvious to recycle the asphaltene stream. Recycling the asphaltene stream would allow the separated stream to be further processes, thereby achieve a higher degree of separation, than without recycle.

### ***Conclusion***

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John C. Douglas whose telephone number is 571-272-1087. The examiner can normally be reached on 7:30 A.M. to 4:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn A. Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JCD

12/19/2007



Glenn Caldarola  
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